NEUTRON SCIENCES
USERNews Weekly
June 20 – June 26, 2011 — Oak Ridge National Laboratory Neutron Sciences

The Director's Coffee Break

HFIR Lounge
7964K, Rm. 17
June 24, 2011
11:00 AM

Contacts:

SNS Instrument Hall Coordinator	241-4432
ORNL LSS	574-6606
Computer Helpline	241-6765
ORNL Taxi	680-2303
	680-9800
Weather	574-9836
SNS	
Control Room	576-1503
RCT Support (radiation control technician)	274-8658
User Support	241-4432
User Office	574-4600
HFIR	
Control Room	574-7035
RCT Support (radiation control technician)	574-6713
User Office	574-4523

SNS Café, Bldg 8600
Breakfast hours: M–F, 7:00 am – 9:30 am
Lunch hours: M–F, 10:45 am – 1:15 pm

HFIR Canteen, Bldg 7910
Lunch hours: M–F, 10:45 am – 1:15 pm

For questions or comments email us:
neutronscience@ornl.gov

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Research Spotlight

Users study superalloys with new load-under-heat capability at VULCAN

Novel ferritic superalloys have been designed for ultra-supercritical steam-turbine applications. However, the resistance of these Fe-based alloys must be further improved, and this requires a fundamental understanding of the micro-mechanisms of high-temperature deformation at the local beta and beta prime levels. The work on the VULCAN instrument at the SNS is studying the relationships among microscopic elastic-lattice strains, microstructure evolution, and macroscopic creep behavior. The resulting data will provide insights into micromechanical deformation in such materials. Vulcan, the Engineering Materials Diffractometer, has the unique advantage of both high neutron flux and high resolution, that enables it to precisely determine the low-intensity superlattice peaks. The experiment uses the newly developed load-under-heat capability to solve these challenging material sciences problems. Collaborating are Shenyan Huang, Wei Wu, and Peter Liaw of the University of Tennessee and Ke An, lead instrument scientist at VULCAN.

This Week's Users

SNS, BASIS (BL2)
Niina Jalarvo (Juelich)
Michael Ohl (Juelich)
Jason Simmons (NIST)
Jeffery Thomson (Univ of Arizona)
Eugene Mamontov (ORNL NScD)
Delphine Gout (ORNL NScD)

SNS, SNAP (BL3)
William Woerner (State Univ of NY)
Christopher Tulk (ORNL NScD)
Jamie Molaison (ORNL NScD)
Antonio M. Dos Santos (ORNL NScD)
Neelam Pradhan (ORNL NScD)

SNS, Magnetism Reflectometer (BL4A)
Daniel Schumacher (Juelich)
Elisabeth Josten (Juelich)
Stefan Mattauch (Juelich)

SNS, Liquids Reflectometer (BL4B)
Ketki Sharma (Georgia Inst of Tech)
Costas Tsouris (ORNL E&ESD)
Bradley Lokitz (ORNL PSD)
Gabriel Veith (ORNL PSD)
Wyatt Tenhaeff (ORNL PSD)
Loic Baggetto (ORNL PSD)
Kai Xiao (ORNL PSD)
Llia Ivanov (ORNL PSD)
Sidney Kilbey II (ORNL CNMS)
Deanna Pickel (ORNL CNMS)
John Ankner (ORNL NScD)
Jim Browning (ORNL NScD)
Valeria Lauter (ORNL NScD)
Jong Keum (ORNL NScD)

SNS, CNCS (BL-5)
Maiko Kofu (Univ of Tokyo)
Osamu Yamamuro (Univ of Tokyo)
Atsushi Nagoe (Univ of Tokyo)

SNS, EQ-SANS (BL6)
Letitia Olson (Univ of Tenn)
William Heller (ORNL NScD)
Gary Lynn (ORNL NScD)

SNS, VULCAN (BL7)
M. Rawlings (Northwestern Univ)
Yuan Wu (Univ of Sci & Tech Beijing)
Zhaoping Lu (Univ of Sci & Tech Beijing)
Michael Gharghouri (Nat Research Council of Canada)
Shenyan Huang (Univ Tenn)
Wei Wu (Univ of Tenn)
Peter Liaw (Univ Tenn)
Zhiqian Sun (Univ Tenn)
Gongyao Wang (Univ Tenn)
Dong Ma (ORNL NScD)
Xun-Li Wang (ORNL NScD)

SNS, POWGEN (BL11A)
Stephen Skinner (Imperial College)
Miguel Laguna-Bercero (Universidad de Zaragoza)
Paula Bauer Pereira (Juelich)
Raphael Hermann (Juelich)
Khorgolkhuu Odbadrakh (ORISE)
Gerard Ludtka (ORNL PSD)
Orlando Rios (ORNL PSD)
Boyd Evans III (ORNL E&ESD)
Benedikt Klobes (Juelich)
Benjamin Shassre (Juelich)
Olivier Gourdon (ORNL NScD)
Jason Hodges (ORNL NScD)
Landon Solomon (ORNL NScD)

SNS, TOPAZ (BL12)
Dalgis Mesa (Louisiana State Univ)
Feng Ye (ORNL NScD)
J. Fernandez-Baca (ORNL NScD)

SNS, NSE (BL-15)
Michihiro Nagao (Indiana Univ)
Andrea Hamill (NIST)
Paul Butler (NIST)
Michael Ohl (Juelich)

SNS, SEQUOIA (BL17)
Jonathan Taylor (ISIS Pulsed Neutron & Muon Source)
Jonathan Duffy (Univ of Warwick)
Stuart Campbell (ORNL NScD)

SNS, ARCS (BL18)
Brent Fultz (CA Institute of Tech)
Chen Li (CA Institute of Tech)
Hillary Smith (CA Institute of Tech)
Glenn Garrett (CA Institute of Tech)
Nikolay Agladze (Cornell Univ)
Michael Manley (LLNL)
Judy Pang (ORNL PSD)
Gene Ice (ORNL PSD)
Douglas Abernathy (ORNL NScD)

HFIR, Cold TAS (CG-4C)
Maiko Kofu (Univ of Tokyo)
Osamu Yamamuro (Univ of Tokyo)
Atsushi Nagoe (Univ of Tokyo)
Pengcheng Dai (Univ of Tenn)
Chenglin Zhang (Univ of Tenn)
Guotai Tan (Univ of Tenn)
Tao Hong (ORNL NScD)

HFIR, (CG-1D)
Gene Ice (ORNL MSTD)
Judy Pang (ORNL MSTD)
Fred List (ORNL MSTD)
Oleg Barabash (ORNL MSTD)
Rozaliya Barabash (ORNL MSTD)
Eliiot Specht (ORNL MSTD)
John Budai (ORNL MSTD)
Lee Robertson (ORNL NScD)
John Katsaras (ORNL NScD)

HFIR, (CG-2)
Gang Cheng (SNL)
Lee Hoffman (South Dakota St Univ)
Lilin He (ORNL NScD)
Yuri Meinichenko (ORNL NScD)

HFIR, (CG-3)
Soo Hyung Choi (Univ of CA)
Dan Krogstad (Univ of CA)
Eugene Pinkhassik (Univ of Memphis)
Sergery Dergunov (Univ of Memphis)
Valerie Bertelier (Univ of Tenn)
H. McWilliams-Koeppen (Univ of Tenn)
Andrew Richter
Christopher Stanley (ORNL NScD)
Sai Venkateh Pingali (ORNL NScD)
Volker Urban (ORNL NScD)

HFIR, TAS (HB-1)
Chenglin Zhang (Univ of Tenn)
Pengcheng Dai (Univ of Tenn)
Guotai Tan (Univ of Tenn)
Yu Song (Univ of Tenn)
Zhijun Xu (Brookhaven Nat'l Lab)
Jinsheng Wen (Brookhaven Nat'l Lab)

HFIR, TAS (HB-1A)
Stuart Calder (ORISE)
Doug Abernathy (ORNL NScD)
Mark Lumsden (ORNL NScD)
Andrew Christianson (ORNL NScD)
Matthew Stone (ORNL NScD)
Tao Hong (ORNL NScD)
Xianglin Ke (ORNL NScD)

HFIR, Powder Diffractometer (HB-2A)
Pnina Ari-gur (Western Michigan Univ)
Stewart Voit (ORNL NS&ED)
Claudia Rawn (ORNL PSD)
James Vedder (ORNL NS&ED)
Lauren Klee (ORNL NS&ED)
Stephen Wilson (Boston College)
Stuart Calder (ORNL NScD)
Andy Christianson (ONRL NScD)
Doug Abernathy (ORNL NScD)
Mark Lumsden (ORNL NScD)
Matt Stone (ORNL NScD)

HFIR, (HB-2B)
Kiran Nainmal Solanki (Miss State Univ)
Wil Whittington (Miss State Univ)

HFIR, TAS (HB-3)
William Ratcliff (NIST)
Karunakar Kothapalli (Univ of Maryland)
Stephen Nagler (ORNL NScD)
Mark Lumsden (ORNL NScD)
Andrew Christianson (ORNL NScD)
Karol Marty (ORNL NScD)

HFIR, Four Circle Diffractometer (HB-3A)
Pencheng Dai (Univ of Tenn)

Local Happening

6//21/2011 Seminar
Spend and Manage Debt Wisely, Bldg. 8600, SNS Iran Thomas Auditorium, Room 103, 10:00 – 11:00 AM

6//21/2011 Seminar
Investigating the Thermal Stability and Cation Ordering in Layered Cathode Materials LixMO2 (x ≤ 1; M = Mn, Co, Ni) for Li-ion Rechargeable Batteries, Bldg. 4500S, Rm. A-177, 10:00 – 11:00 AM

6/24/2011 Seminar
Comparisons of Measured and Simulate Neutron Spectroscopy Data from ZrH2, Garrett Granroth, CNMS 8610, Room L-183, 9:30 -11:00 AM

6/24/2011 Seminar
Solvent-induced change in fractal conformation & aggregation behavior of reioregular poly 93-hexylthiophene & its influence on thin film morphology: Neutron & x-ray scattering, Jong Keum, CNMS 8610, Room L-183, 9:30 – 11:00 AM